

RELATIVE HUMIDITY

There were large excesses in the average percentages of relative humidity, as compared with the normal, in most of the mountain and southern plateau States, where

the positive departures ranged from 10 to 20 per cent; there were excesses also from the Ohio Valley southward and southeastward to the Gulf and South Atlantic States. In other districts the averages were mainly below normal, the deficiencies being large in the far Northwest.

SEVERE LOCAL STORMS, SEPTEMBER, 1929

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A more complete statement will appear in the annual report of the chief of bureau]

Place	Date	Time	Width of path, yards ¹	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Fergus and Wheatland, Mont.	1					Hail	Considerable crop destruction	Official, U. S. Weather Bureau.
Toole and Hill, Mont.	2					do	do	Do.
Paducah, Tex.	4	3 p. m.	440		\$2,500	do	Crops damaged and poultry killed or injured	Do.
Rankin, Tex.	4	5.40 p. m.	4 mi.		4,000	Hail and wind	Buildings unroofed and otherwise damaged by wind.	Do.
Littlefield, Tex.	4	7 p. m.	10 mi.			do	Crops considerably injured	Do.
Liberty, Mont.	4					Hail	Crops damaged	Do.
Plainview, Tex.	5	8 p. m.	1,760		25,000	do	do	Do.
Spur, Tex.	5	8 p. m.	2,640		10,000	do	do	Do.
Crosbyton, Tex.	5	10 p. m.	3 mi.			do	do	Do.
Anadarko, Okla.	8	5 p. m.	6 mi.		100,000	Wind and rain	Buildings and crops damaged	Do.
Kingston, Okla.	8	5 p. m.				Hail	Severe damage to property and crops	Do.
Fort Stockton, Tex.	8	5-7 p. m.	5 mi.		50,000	Wind	Chief damage to crops; minor property damage	Do.
Chickasha, Okla. (4 miles southwest of)	8	7-8 p. m.	1,760		33,000	do	Much damage to property; 1 person injured	Do.
Chickasha, Okla. (northwest of)	8	8 p. m.	1,320			Hail	Damage chiefly to property other than crops	Do.
Norman, Okla. (near)	8	9.15 p. m.	1,760		25,000	Wind	Crops and buildings damaged	Do.
Stonewall, Okla. (near)	8	10 p. m.				Wind and hail	Airport and 2 planes damaged; 2 planes demolished; minor crop injury; 1 person injured	Do.
Monroe, Wapello, and Delaware Counties, Iowa.	8	P. m.			63,000	do	Crops badly damaged; 4 persons injured	Do.
Pennsylvania (southeastern).	8			1	100,000	Wind, rain, and electrical.	Character of damage not reported	Do.
San Jon, N. Mex. (10 miles southeast of)	8					Small tornado	Several barns destroyed; great crop damage over entire section	Do.
Wayne, Okla., and vicinity.	8		2 mi.		75,000	Wind	A few farm buildings wrecked	Do.
Westminster, Md.	8				20,000	Electrical	Extensive damage to crops and other property	Do.
Spur, Tex.	9	10 p. m.	2 mi.		50,000	Hail	2 barns and contents destroyed	Do.
Lake Michigan, (near Grand Haven, Mich.)	10			25		Wind	Crops damaged	Do.
Oilton, Tex.	11	8-9 p. m.	880		10,000	Hail	Steamer Andaste foundered, losing entire crew	Do.
Dillon, S. C.	14	2 p. m.	80		1,500	Small tornado	Crops considerably injured	Do.
Arizona (south-central and southeastern).	19-24				50,000	Wind, rain, and floods.	A warehouse damaged; 3 persons injured	Do.
Lee Ranch, N. Mex. (near)	25					Hail	Much damage to roads, culverts, and bridges	Do.
Houghton, Mich.	27	P. m.				Thunderstorm, hail, and rain.	75 per cent of crops ruined	Do.
Miami and Fort Lauderdale area, Fla.	28	P. m.				5 tornadoes.	Windows broken; considerable damage to telephone and electric circuits.	Do.
Florida (southern and western).	28-30			3	676,000	Tropical hurricane.	Details not yet received	Do.
Grays Lake and Ava, Ill.	29					Electrical	Heavy damage to fruit and truck, highways, telephone and telegraph lines, small boats and equipment, timber, buildings, power plants, and shops.	Do.
Pottsville, Pa., and vicinity.	29-30				20,000	Hail and rain	4 barns destroyed	Do.
							Damage confined to flooding of cellars, washing of fields, etc.; several small bridges destroyed.	Do.

¹ Mi. signifies miles instead of yards.

RIVERS AND FLOODS

By R. E. SPENCER

No floods of importance occurred during September, except those in the South Atlantic and East Gulf States during the last three days and that in the Rio Grande in the vicinity of San Marcial, N. Mex., on the 23d. As the South Atlantic and East Gulf floods were in all cases merely forerunners of much more severe ones in early October, they will be discussed in the flood report for that month.

The Rio Grande rise, resulting from heavy local rains about the 22d, exceeded by 0.5 foot the high-water record of last month at San Marcial, destroying the levee and completely flooding the town. Press accounts state that only three buildings remained standing after the flood. Incomplete reports of losses place the total at \$92,000, divided as follows:

Tangible property	\$60,000
Matured crops	10,000
Prospective crops	15,000
Livestock, etc.	2,000
Suspension of business	5,000